CLAIMS

What is claimed is:

1. An articulated, tiltable steering column for a steering wheel, the column comprising:

an upper steering wheel column member;

a lower stationary steering column member;

a pivot connection between the upper and lower column members allowing the steering wheel to be tiltably adjusted about the pivot connection to selected positions of adjustment;

a locking mechanism for retaining the upper and lower column members in selected positions of adjustment, the locking mechanism including a rod disposed between the upper and lower column members, the rod received by and slidable along a longitudinal axis within a sleeve, the rod and sleeve including a passage formed therein for receiving a shaft;

a collar journalled around the sleeve and including diametrically opposed bores for receiving the shaft; and

a biasing member secured at a first end to a mounting portion extending from the sleeve and secured at a second end by the collar, the biasing member providing a rotational bias on the sleeve.

2. The steering column of claim 1, wherein the collar is retained at a first end by an annular wall extending from the sleeve and retained at a second end by a nut threadably received by the sleeve.

3. The steering column of claim 1, wherein the biasing member creates a load transmitted by the second end to the collar and generally carried by the shaft.

4. The steering column of claim 1, wherein the outer diameter of the shaft is substantially equal to the diameter of the diametrically opposed bores.

5. The steering column of claim 4, wherein the shaft provides an interference fit with the diametrically opposed bores.

6. The steering column of claim 1, wherein the mounting portion of the first end of the biasing member includes a snap ring journalled around the sleeve.

7. An articulated, tiltable steering column for a steering wheel, the column comprising:

an upper steering wheel column member;

a lower stationary steering column member;

a pivot connection between the upper and lower column members allowing the steering wheel to be tiltably adjusted about the pivot connection to selected positions of adjustment;

a locking mechanism for retaining the column members in selected positions of adjustment, the locking mechanism including:

a sleeve including opposing slots, arranged so as to equally align and form a continuous passage therethrough;

a rod disposed between the column members, and received by and slidable along a longitudinal axis within the sleeve, the rod including a longitudinal slot formed therein; and

a pivot shaft extending through the continuous passage of the sleeve and the longitudinal slot of the rod, the pivot shaft limiting axial movement of the rod within the shaft by the longitudinal slot and limiting rotational movement of the rod within the sleeve by the opposing slots.

8. The steering column of claim 7, wherein the opposing slots are formed perpendicular to the longitudinal axis of the sleeve.

9. The steering column of claim 7, wherein the pivot shaft further extends through a collar journalled around the sleeve.

10. The steering column of claim 9, wherein the pivot shaft has an interference fit with the pivot shaft and transfers rotational loads from the pivot shaft to the collar.

11. A method of installing a rotary tilt mechanism in a motor vehicle, the rotary tilt mechanism having a rod disposed within and selectively translatable along a longitudinal axis within a sleeve, the sleeve rotatably biased around the rod by a biasing member, the tilt mechanism further including a first mounting shaft coupled to an upper steering wheel column member and a second mounting shaft coupled to a lower steering wheel column member, the method comprising the steps of;

sliding a collar along the longitudinal axis of the sleeve to a predetermined location;

engaging the collar to a first end of the biasing member;

creating a mounting passage by rotating the collar in a direction of increased bias to a location aligning passages incorporated in the collar with passages incorporated on the sleeve and the rod;

advancing a locking element along the sleeve to a position precluding rotation of the collar; and

inserting one of the first and second mounting shafts through the mounting passage.

12. The method of claim 11, wherein the step of sliding the collar along the longitudinal axis to a predetermined location includes the step of positioning a first end of the collar against a thrust wall radially extending from the sleeve.

13. The method of claim 11, wherein the step of engaging the collar to a first end of the biasing member includes the step of placing the first end of the biasing member in a groove formed on the collar between an outer wall and a tangentially extending ear formed on the outer wall of the collar.

14. The method of claim 11, wherein the step of advancing the locking element includes the step of advancing an engagement side of the locking element into engagement with a second end of the collar.

15. The method of claim 14, wherein the step of advancing the engagement side of the locking element includes the step of applying an adhesive on one of the engagement side of the locking element and the second end of the collar.

16. The method of claim 11, wherein the step of advancing the locking element along the sleeve to a position precluding the collar from rotating includes the step of placing the collar in a position axially compressing the collar between the locking member and the thrust wall.

17. A method of installing a rotary tilt mechanism in a motor vehicle, the rotary tilt mechanism having a rod disposed within and selectively translatable along a longitudinal axis within a sleeve, the sleeve rotatably biased around the rod by a biasing member, the tilt mechanism further including a first mounting shaft coupled to an upper steering wheel column member and a second mounting shaft coupled to a lower steering wheel column member, the method comprising the steps of;

positioning a collar into engagement with a first end of the biasing member;

rotating the collar in a direction of increased bias;

positioning a locking element adjacent to the collar allowing alignment of passages incorporated on the rod, sleeve and collar to form a common mounting passage; and

admitting one of the first and second mounting shafts through the mounting passage.

18. The method of claim 17, wherein the step of positioning the collar into engagement with a first end of the biasing member includes the step of positioning a first end of the collar against a trust wall radially extending from the sleeve.

19. The method of claim 17, wherein the step of positioning the collar into engagement with a first end of the biasing member includes the step of placing the first end of the biasing member in a groove formed on the collar between an outer wall and a tangentially extending ear formed on the outer wall of the collar.

20. The method of claim 18, wherein the step of advancing the locking element includes the step of advancing an engagement side of the locking element into engagement with a second end of the collar.

21. The method of claim 20, wherein the step of advancing the engagement side of the locking element includes the step of applying an adhesive on one of the engagement side of the locking element and the second end of the collar.

22. The method of claim 17, wherein the step of positioning the locking element adjacent the collar allowing alignment of the passages incorporated on the rod, sleeve and collar to form a mounting passage includes the step of advancing the locking element into a position precluding rotation of the collar.

23. The method of claim 22, wherein the step of advancing the locking element into a position precluding rotation of the collar includes advancing the locking element into a position axially compressing the collar between the locking element and the thrust wall.